REMARKS

Claims 1, 3 - 6 and 10 - 22 are pending in this application. Of these claims, Claims 14 - 22 have been withdrawn from consideration.

The Rejections

No. 1 The Examiner has rejected Claims 1, 2, 3, 5, 6, 9 and 10 under 35 USC 103(a) as being unpatentable over Arnio, et al. (US 5,071,359) in combination with Stone (US 5,770,476).

No. 2 The Examiner has also rejected Claims 4, 11 and 12 under 35 USC 103(a) as unpatentable over Arnio, et al. as applied to Claims 3 or 5 and in further combination with Jimarez, et al. (US 6,191,952).

No. 3 The Examiner has additionally rejected Claim 7 under 35 USC 103(a) as being unpatentable over Arnio, et al. and Stone as applied to Claim 5, and further in combination with Sado (US 4,330,165).

No. 4 Finally, the Examiner has rejected Claim 13 under 35 USC 103(a) as being unpatentable over Arnio, et al. and Stone as applied to Claim 6, and further in combination with Isaacs, et al. (US 5,275,330).

It is noted that Claims 2 and 9, rejected in Rejection 1 above, and Claim 7, rejected in Rejection 3 above, have previously been canceled.

Rejection No. 1

With regard to Rejection 1, the Examiner has attempted to read the various limitations of the rejected claims directly on Arnio, et al. However, Applicants believe that the Examiner's reading of particular claim limitations on Arnio, et al. is clearly in error.

For example, the Examiner states that Arnio, et al. disclose "a layer of elastic dielectric material (34) with an inherent elastic modulus having an array of copper, metal plated vias (Col. 3, line 35) extending from one surface of said dielectric to the other surface ...".

The array of copper plated vias described by Arnio et al. in Col. 3 is shown in Figure 2. Since Arnio, et al describe all of the vias of the array shown in Figure 2 as copper plated vias with raised rims, the totality of these vias must be included in reading the claim limitation calling for "an array of copper plated vias" on Arnio et al., particularly in light of subsequent claim limitation recitation. It is also noted that Claim 1 calls for "copper plated vias filled with solder" while the filled vias of Arnio, et al. are filled with copper.

The Examiner goes on to state in rejection No. 1 that Arnio, et al. disclose the claim limitation "said elastic member having a uniform array of holes (12; Fig. 2a) extending therethrough (Fig. 2; 2nd and 4th column) and arranged so that individual ones of said array of copper plated vias (Fig. 2; 1st, 3rd and 5th column) so as to facilitate uniform compliance of said interposer".

Clearly, Arnio, et al. fail to teach or suggest this latter recitation. Firstly, the so-called holes 12 of Arnio, et al. must necessarily be treated as vias, according to Arnio's own detailed description. In addition, the copper plated vias 12 of Arnio, et al. cannot be holes that facilitate uniform compliance since they are rigid and since they are not substantially surrounded by copper plated vias.

More importantly, however, is the fact that there is a clear distinction in Applicants' claims between "copper plated vias" for electrical contact and "holes" to facilitate compliance. Not only is there a clear distinction in the claims between "vias" and "holes", Applicants have clearly set forth each of their meanings in their specification. Applicants' meaning of the term "vias" is described and defined starting on page 6 and the meaning of "holes", as distinct from "vias", is described and defined on page 7. In this regard, when the specification states the meaning that a term in a claim is intended to have, the claim is to be examined using that meaning, in order to achieve a complete exploration of the Applicants' invention and its relation to the prior art. In re Zlety, 893 F. 2nd 319, 13 USPQ2d 1320 (Fed. Cir. 1989).

Accordingly, Applicants do not believe that the Examiner can properly read "holes ... positioned to be substantially surrounded by individual ones of said array of copper plated vias so as to further facilitate uniform compliance" on the copper plated vias of Arnio, et al. To do so ignores the plain meaning of "holes" in the context of the claims and the Arnio, et al. patent. Claims are not to be read in a vacuum, and limitations therein are to be interpreted in light of the specification in giving their broadest reasonable interpretation. In re Okuzawa, 537 F.2d 545, 190 USPQ 464.

The plain meaning of "vias" and "copper plated vias" is clear in both Arnio, et al. and Applicants' invention. Given this plain meaning, then, the claim limitations calling for "copper plated vias" must, again, be read on all of the copper plated vias of Arnio, et al. On the other hand, Arnio, et al do not disclose "holes", as set forth in Applicants' claims. Accordingly, each of independent Claims 1 and 5 clearly patentably distinguish over Arnio, et al., whether taken alone or in combination with any of Stone, Jimarez, et al. Sado or Isaacs, et al.

Rejection No. 2

In regard to the Examiner's rejection including Jimarez, et al., Applicants would again like to point out that Applicants are claiming a modulus in the range of 50,000 to 400,000 while the range taught by Jimarez is 50,000 to 20,000 psi. Thus, the ranges are divergent, i.e., the Jimarez, et al. range goes in opposite direction to the range taught by Applicants.

Rejection No. 3

With regard to the Examiner's rejection adding Sado, Applicants would like to again point out that Sado is directed to solving a different problem than either Arnio, et al. or Applicants. Moreover, Sado does not employ copper plated vias but rather linear conductive bodies. Given these divergent teachings, it would not be obvious to employ teachings of Sado in Arnio, et al. In this regard, it should be noted, as set forth in

Applicants' specification on page 8, the "V-shaped metal plated vias" set forth in Applicants' claims allows the opposing pads to which they connect to be in vertical alignment. Thus , the V-shaped vias not only allow resilience but also allow the unobvious result of vertical alignment of opposing pads.

Rejection No. 4

With regard to the Examiner's rejection of Claim 13 under 35 USC 103(a) as being unpatentable over Arnio, et al. and Stone as applied to Claim 6, and further in combination with Isaacs, et al., Applicants, again, believe that this is an improper combination.

Isaacs, et al. patent is directed to a multilayer printed circuit substrate and is concerned with the manner of attachment of a module thereto. Isaacs, et al. are not concerned with CTE mismatch between chip and laminate chip carrier, as described by Applicants. If they were, there would be some discussion in regard to the manner in which solder balls 40 attach to substrate 10.

More importantly, however, Isaacs, et al. are not concerned with an elastomeric electrical connector for dematebly interconnecting an array of contact pads on a surface, as taught by Arnio, et al. Accordingly, it would not be obvious to one skilled in the art to conclude that the solder filled vias of the Isaacs, et al. multilayer substrate would be operative in the elastomeric interconnector sheet, as taught by Arnio, et al. The function of the interconnector of Arnio, et al. is quite different than the function of the multilayer

printed circuit substrate of Isaacs, et al. It should also be noted that where Arnio, et al. do fill their vias, they fill them with copper.

Conclusion

In view of Applicants' remarks, Applicants firmly believe that the claims, as presented, are clearly allowable over the art relied upon by the Examiner. Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the outstanding rejection, allow the claims as presented and pass the case to issue.

Respectfully submitted,

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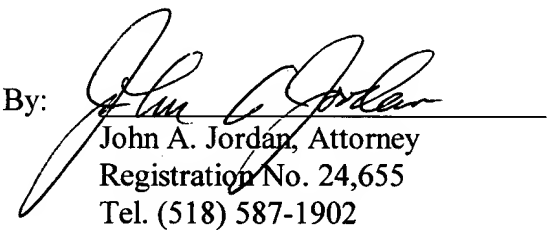
By: 

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